ORIGINAL

RECEIVED
MAY 24 1995
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the	)	
Commission's Rules to Adopt	)	PR Docket No. 93-61
Regulations for Automatic	)	
Vehicle Monitoring Systems	)	

DOCKET FILE COPY ORIGINAL

COMMENTS OF SYMBOL TECHNOLOGIES, INC. ON PETITIONS FOR RECONSIDERATION

Symbol Technologies, Inc.
2145 Hamilton Avenue
San Jose, CA 95125-5905
(408) 446-2210

Gerald P. McCartin
Mitchell Lazarus

Arent Fox Kintner Plotkin & Kahn
1050 Connecticut Avenue, N.W.
Washington, DC 20036-5339
(202) 857-6070/6466
Counsel for
Symbol Technologies, Inc.

May 24, 1995

No. of Copies rec'd 0+4
List A B C D E

SUMMARY

The Commission has achieved a sound compromise on the relationship among users who share the 902-928 MHz band.

The rulemaking complies in full with the APA. The Notice of Proposed Rule Making gave ample notice that Part 15 issues would be a major concern in this proceeding. The Notice went so far as to alert the parties that one of the Commission's options was to expand the rights of Part 15 users; and a document cited in a subsequent Public Notice, inviting a second round of comments and replies, raised Part 15 issues yet again.

The Commission has not impermissibly changed the relative roles of LMS and Part 15, as some Petitioners claim, by declaring certain Part 15 devices not to be a source of harmful interference to LMS. Under the Rules, LMS is not entitled to any protection from Part 15, except as may be specified in the LMS rules; and the Commission was well within its authority to impose limitations when it inserted Part 15 protection in the Report and Order. Likewise, the requirement that certain multilateration licensees test their equipment for compatibility with Part 15 is on a solid legal footing: The Commission need not have licensed such systems at all, and having done so, it can properly require testing to facilitate shared use of the spectrum.

Finally, Symbol suggests changes to help accommodate the concerns of LMS interests and supports certain proposals advanced by other Part 15 parties.

TABLE OF CONTENTS

RECEIVED
MAY 24 1995
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the	)	
Commission's Rules to Adopt	)	PR Docket No. 93-61
Regulations for Automatic	)	
Vehicle Monitoring Systems	)	

DOCKET FILE COPY ORIGINAL

COMMENTS OF SYMBOL TECHNOLOGIES, INC.
ON PETITIONS FOR RECONSIDERATION

1. Symbol Technologies, Inc. ("Symbol") hereby submits these Comments in response to Petitions for Reconsideration of the Report and Order in the above-captioned proceeding.[1/]

I. INTRODUCTION

2. It was plain from the first round of comments in this proceeding that the Commission would not be able to please everyone. The Petitions for Reconsideration amply confirm that prediction. But the Report and Order nonetheless achieves something remarkable: It has enabled the introduction of a new service in the already crowded 902-928 MHz band with only minimal disruption to the incumbents. That feat necessarily entails some compromise; and indeed, the Report and Order is not precisely

---

[1/] Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, Report and Order, FCC 95-41 (released Feb. 6, 1995) ("Report and Order"). Symbol is the leading manufacturer of portable bar code driven data transaction systems, with 2.5 million scanners and hand-held computers installed, and is a major manufacturer of commercial Part 15 spread spectrum communications equipment. Symbol designs, manufactures, and markets bar code laser scanners, portable computers, and spread spectrum data communications networks that are used as strategic building blocks in technology systems for retail, warehousing, distribution, manufacturing, package and parcel delivery, health care, and other industries.

what either the LMS proponents or Part 15 users would have wished. The Petitions for Reconsideration now highlight the boundaries of that compromise as the parties make a last-ditch effort to redraw the lines.

3. Symbol believes that the Report and Order is a lawful and reasonable reconciliation of the proceeding's many competing interests. The Supreme Court has long acknowledged an agency's "power to weigh the competing interests and arrive at a balance that is deemed 'the public convenience and necessity.'"[2/] That is precisely what the Commission has done here. With the exceptions noted below, Symbol urges the Commission to deny the Petitions for Reconsideration and to let the Report and Order stand.

II. THE COMMISSION ACTED LEGALLY AND IN THE PUBLIC INTEREST IN ADOPTING PROTECTIONS FOR PART 15.[3/]

4. Several LMS interests challenge two provisions in the Report and Order relating to Part 15: Section 90.361, which provides that certain Part 15 operations "will not be considered to be causing harmful interference" to certain LMS operations; and Section 90.353(a)(4), which requires certain multilateration LMS licenses to be "conditioned upon the licensee's ability to

---

[2/] Bowman Transp. Inc. v. Arkansas-Best Freight System, Inc., 419 U.S. 281 (1974).

[3/] This section comments on Petitions for Reconsideration filed by MobileVision, L.P. (filed April 24, 1995) ("MobileVision"); Pinpoint Communications, Inc. (filed April 24, 1995) ("Pinpoint"); Southwestern Bell Mobile Systems (filed April 24, 1995) ("Southwestern Bell"); and Uniplex Corporation (filed April 24, 1995) ("Uniplex") (collectively, "Petitioners").

demonstrate through actual field tests that their systems do not cause unacceptable levels of interference to Part 15 devices."

5. The challenges variously argue that (a) the provisions are beyond the scope of the Notice of Proposed Rule Making and hence cannot be adopted without further notice and comment; and (b) the provisions impermissibly elevate Part 15 over Part 90 in the spectrum hierarchy. We show below that neither of these positions is correct.

A. The Report and Order is Properly Within the Scope of the Notice.

6. Some Petitioners assert that the Report and Order violates the Administrative Procedure Act ("APA") because the Part 15 provisions were not adequately foreshadowed in the Notice.[4/]

7. The courts have consistently held, "It is well established that the exact result reached after a notice and comment rulemaking need not be set out in the initial notice for the notice to be sufficient."[5/] To the contrary:

> A final rule may properly differ from a proposed rule -- and indeed must so differ -- when the record evidence warrants the change. A contrary rule would lead to the absurdity that in rule-making under the APA the agency can learn from the

---

[4/] Automatic Vehicle Monitoring Systems, 8 FCC Rcd 2502 (1993) ("Notice"), corrected by Erratum, 8 FCC Rcd 3233 (1993). See Pinpoint at 22; Southwestern Bell at 8-9; Mobilevision at 2. Some Petitioners insist that a Part 15 rule making is also necessary. Pinpoint at 22-23; Southwestern Bell at 7-8.

[5/] Public Service Comm'n v. FCC, 906 F.2d 713 (D.C. Cir. 1990).

> comments on its proposals only at the peril of starting a new procedural round of commentary.[6/]

The law requires only that the rule promulgated be a "logical outgrowth" of the rule proposed.[7/]

8. In this proceeding, the relationship between LMS and Part 15 was central from the start. Not only did the Notice warn of possible interference to LMS from Part 15,[8/] but it also quoted a Part 15 interest as saying, "[T]he Commission should take action to provide Part 15 users greater rights when operating in the 902-928 MHz band."[9/] With that passage in the record, the LMS parties cannot now complain that the Commission's actions in the Report and Order, affording Part 15 users greater rights in the band, is other than a logical outgrowth of the Notice.[10/]

[6/] Edison Elec. Inst. v. OSHA, 849 F.2d 611, 621 (D.C. Cir. 1988).

[7/] Public Service Comm'n v. FCC, 906 F.2d at 713.

[8/] Notice at ¶ 24.

[9/] Notice at ¶ 24, n.50.

[10/] If any doubt remained, it would be put to rest by a subsequent Public Notice in which the Commission invited a second round of comments and reply comments in response to certain ex parte filings by LMS proponents. Additional Comment Sought on Ex Parte Presentations, PR Docket No. 93-61, Public Notice DA 94-129 (released Feb. 9, 1994); supplemented by Order, PR Docket No. 93-61, DA 94-178 (released Feb. 25, 1994). One of the three filings cited in the Public Notice referred to "the environment for Part 15 devices," Letter from John Lister, President and co-CEO, PacTel Teletrac, to Ralph A. Haller, Chief, Private Radio Bureau, FCC at 1 (Jan. 26, 1994), and several of the responsive comments and replies in fact addressed Part 15 issues at length.

B. Allegations That the Commission Has Improperly Shifted the Balance Between LMS and Part 15 Are Incorrect.

9. Some Petitioners complain that the Commission has improperly "elevated" Part 15 from its secondary status by establishing a so-called "irrebuttable presumption" of non-interference from Part 15 devices satisfying Section 90.361, and by instituting the field testing requirement of Section 90.353(a)(4).[11/] These allegations are refuted by a study of the Commission's Rules.

1. LMS is not entitled to protection from Part 15 except as specified (and limited) in the LMS rules.

10. Petitioners' concerns about Part 15 "elevation" and "irrebuttable presumptions" apparently derive from a view that LMS, being a licensed service, is thereby entitled to protection from Part 15. That view is fallacious. The only protection that LMS has from Part 15 is in the Report and Order. Therefore, the limitations imposed on that protection in the Report and Order are beyond reasonable challenge.

[11/] MobileVision at 11 ("the Commission, in an effort to protect Part 15 devices, has effectively elevated their rights to that of co-equal status with LMS providers and, in certain circumstances, higher than licensed LMS services"); Pinpoint at 22 ("*as a general matter, multilateration systems are secondary to Part 15 devices*") (full italics in original).

One Petitioner further charges that "the non-rebuttable presumption of non-interference is at variance with Title III of the Communications Act, inasmuch as the Commission has not fulfilled its statutory duty to protect licensed stations from harmful interference caused by unlicensed operation." Pinpoint at 23, citing 47 U.S.C. §§ 301 and 302. If Pinpoint is arguing that the Part 15 regulatory scheme is in violation of the Communications Act, it is doing so in the wrong proceeding.

11. Most licensed services indeed have blanket protection from Part 15 interference. Section 15.5 states, in pertinent part,

> (b) Operation of an intentional, unintentional, or incidental radiator [under Part 15] is subject to the conditions that no harmful interference is caused and that interference must be accepted that may be caused by the operation of an authorized radio station, by another intentional or unintentional radiator, by industrial, scientific and medical (ISM) equipment, or by an incidental radiator.
>
> (c) The operator of a [Part 15] radio frequency device shall be required to cease operating the device upon notification by a Commission representative that the device is causing harmful interference. Operation shall not resume until the condition causing the harmful interference has been corrected.[12/]

"Harmful interference" is a term of art in the Commission's Rules, defined as

> [a]ny emission, radiation or induction that endangers the functioning of a radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunications service operating in accordance with this chapter.[13/]

It follows that only radio navigation services and radiocommunications services can be subject to harmful interference, and hence only those services are entitled to protection from Part 15. But LMS is neither of those.

12/ 47 C.F.R. §§ 15.5(b), (c) (emphasis added).

13/ 47 C.F.R. § 15.3(m) (emphasis added). A similar definition appears at 47 C.F.R. § 2.1.

12. A radionavigation service provides "[r]adiodetermination used for the purposes of navigation, including obstruction warning."[14/] "Radiodetermination" means

> [t]he determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.[15/]

LMS is not used for navigation, as that term is generally understood. On the other hand, LMS precisely fits the definition of radiodetermination; and the definition of "harmful interference" omits radiodetermination as a potential victim.[16/]

13. Nor does LMS qualify for protection as a radiocommunications service, which by definition provides "transmission, emission, or reception of signs, signals, writing, images and sounds or intelligence of any nature . . ."[17/] LMS is authorized to offer certain communications functions only on an ancillary basis.[18/] To make that ancillary operation the

---

[14/] 47 C.F.R. § 2.1 (definitions of "radionavigation service," "radionavigation").

[15/] 47 C.F.R. § 2.1.

[16/] The mere ascertainment of position does not qualify LMS as providing "navigation." If it did, then the Commission's definition of radiodetermination would include radionavigation, and its separate definition of radionavigation would be utterly superfluous.

[17/] 47 C.F.R. § 2.1 (definitions of "radiocommunication service," "telecommunication")

[18/] 47 C.F.R. §§ 90.353(a)(2), (3).

basis for protecting LMS's positioning function would surely be a case of the tail wagging the dog.

14. In short, Section 15.5 does nothing to protect LMS from Part 15. No doubt that is why the Commission inserted language in the Report and Order to accomplish a similar result: "Part 15 and Amateur operations may not cause harmful interference to LMS systems in the 902-928 MHz band."[19/] The same rule section then goes on to provide that certain Part 15 operations "will not be deemed to be causing harmful interference" for purposes of this rule. Although the exclusions specified may not be to Petitioners' liking, their legal footing is perfectly sound.

2. The field-testing requirement does not elevate Part 15 above Part 90.

15. Some Petitioners see the rule requiring licensees to demonstrate compatibility with Part 15 as upsetting a preexisting balance between Part 15 and LMS.[20/] However, the Commission's imposition of that requirement is entirely proper.

16. As explained above, LMS has no a priori claim to the spectrum over Part 15. In seeking a maximal accommodation for all users of the band, the Commission was well within its authority in considering the special compatibility problems

---

19/ 47 C.F.R. § 90.361.

20/ Pinpoint at 22 ("new rules upsetting the heretofore consistent relationship between licensed and unlicensed devices"); MobileVision at 2 ("elevating the status of Part 15 users to co-equal with licensed users").

presented by multilateration technologies.[21] And even if LMS did have a Section 15.5 claim to protection, that still would not affect the Commission's public interest calculation in imposing conditions on the licensing of LMS. Having determined that multilateration systems present an unusually high risk of interference,[22] the Commission has not only the authority, but a statutory obligation, to impose conditions that will reduce the risk to acceptable levels.[23] Section 15.5 cannot override the statutory duty to maximize the effective use of the airwaves.

17. In other words, the Commission was under no obligation to authorize multilateration systems at all. It could well have decided against doing so, on grounds of incompatibility with other services. Instead, the Commission opted to license multilateration systems, but to condition their operation on a showing meant to maximize the benefits to all users of the band. No one could seriously argue that the Commission may lawfully prohibit a certain operation to avoid interference, but cannot take the lesser step of conditioning that operation to avoid the same interference.

---

[21] These problems are discussed in the Report and Order at ¶ 32.

[22] Id.

[23] 47 U.S.C. § 303(c) (Commission's authority to "[a]ssign bands of frequencies to the various classes of stations" is limited by the "public convenience, interest, or necessity").

C. Symbol Proposes Changes To Help Alleviate Petitioners' Concerns.

1. Section 90.361

18. Some Petitioners are concerned that Section 90.361 in its present form gives Part 15 unbridled power over LMS.[24/] Some Petitioners even fear that Part 15 operators will cause intentional interference to LMS.[25/] Although Symbol is confident that all such apprehensions are unrealistic, it proposes that the Commission reassure the Petitioners by adding the following sentence to the end of Section 90.361:

> A Part 15 or Amateur operator that causes persistent or recurrent interference to an LMS system must negotiate in good faith with the LMS operator toward resolving the interference.

This provision would give an LMS licensee recourse against Part 15: An interfering Part 15 operator that did not negotiate in good faith would be in violation of Section 90.361, and hence would be subject to Commission sanctions.

2. Section 90.353(a)(4)

19. Nearly all parties filing Petitions for Reconsideration, whether on behalf of LMS or Part 15 interests, note that the field testing requirement in Section 90.353(a)(4) is too vague to be effectively implemented. Symbol agrees. However, rather than attempt to delineate the testing process by

---

[24/] Pinpoint at 21.

[25/] Pinpoint at 21 n.35. Uniplex suggests that Part 15 users might create intentional interference as a means of extorting monetary payments. Uniplex at 7.

regulation, Symbol urges the Commission to delegate that task to a working group of multilateration LMS providers and Part 15 interests. Those who raised the issue in their Petitions for Reconsideration have already demonstrated their interest in the issue, and might constitute the core of such a working group. Others who are interested but did not file (such as Symbol) can be invited to participate by Public Notice.

20. If the negotiations do not show sufficient signs of progress after a reasonable time, the Commission still has the option of resolving the problem by regulation. Even then, however, the efforts of the working group may assist the Commission by having narrowed the issues and identified the specific points of contention.

III. SYMBOL SUPPORTS CERTAIN REQUESTS FOR RECONSIDERATION ADVANCED BY PART 15 INTERESTS.

21. Symbol supports the following proposals:

-- The height limit in Section 90.361(c)(2) is unnecessary and unworkable, and should be eliminated. In the alternative, Part 15 systems should be permitted to operate under Section 90.361 at full power up to 15 meters of antenna height. In addition, the term "outdoor antenna" in Section 90.361(c) should be clarified to mean a fixed outdoor antenna.[26/]

-- The rules should make clear that the non-interference provisions of Section 90.361 and the field-testing requirement of Section 90.353(a)(4) apply in full to grandfathered LMS systems.

-- All telephone-interconnected voice messaging should be prohibited. The emergency and store-and-forward exceptions are unnecessary and unenforceable; indeed,

---

[26/] See Metricom, Inc. and Southern California Edison Company at 12-13 (filed April 24, 1995).

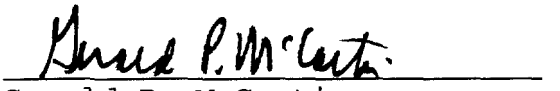
one party has correctly pointed out that content-based enforcement by an LMS provider may be illegal.[27/]

-- The Commission should prohibit wideband forward links as unnecessary to the provision of LMS and a potential detriment to effective sharing of the band.

CONCLUSION

22. For the reasons given above, the Commission should deny the Petitions for Reconsideration discussed in Part II above and implement the changes listed in Part III.

Respectfully submitted,



Gerald P. McCartin

Mitchell Lazarus

Arent Fox Kintner Plotkin & Kahn
1050 Connecticut Avenue, N.W.
Washington, DC 20036-5339
(202) 857-6024/6466
Counsel for
Symbol Technologies, Inc.

Symbol Technologies, Inc.
2145 Hamilton Avenue
San Jose, CA 95125-5905
(408) 446-2210

May 24, 1995

[27/] UTC at 4-8 (filed April 24, 1995).

CERTIFICATE OF SERVICE

I, Mitchell Lazarus, do hereby certify that on this 24th day of May, 1995, I have caused copies of the foregoing Comments of Symbol Technologies, Inc. on Petitions for Reconsideration to be served by first-class mail, postage prepaid, upon the following, except that names marked with an asterisk were served by hand:

Chairman Reed E. Hundt *
Federal Communications Commission
Room 814 - Stop 0101
1919 M Street NW
Washington DC 20554

Commissioner Andrew C. Barrett *
Federal Communications Commission
Room 826 - Stop 0103
1919 M Street NW
Washington DC 20554

Commissioner Rachelle B. Chong *
Federal Communications Commission
Room 844 - Stop 0105
1919 M Street NW
Washington DC 20554

Commissioner Susan Ness *
Federal Communications Commission
Room 832 - Stop 0104
1919 M Street NW
Washington DC 20554

Commissioner James H. Quello *
Federal Communications Commission
Room 802 - Stop 0106
1919 M Street NW
Washington DC 20554

Rosalind K. Allen *
Acting Chief, Commercial Radio Division
Wireless Telecommunications Bureau
Room 5202 - Stop 2000C
2025 M Street, NW
Washington DC 20554

Rudolfo M. Baca *
Office of Commissioner James H. Quello
Federal Communications Commission
Room 802 - Stop 0106
1919 M Street NW
Washington DC 20554

John J. Borkowski *
Wireless Telecommunications Bureau
Federal Communications Commission
Room 5202 - Stop 2000C
2025 M Street NW
Washington DC 20554

Beverly G. Baker *
Chief, Compliance and Information Bureau
Federal Communications Commission
Room 734 - Stop 1500
1919 M Street NW
Washington DC 20554

Bruce A. Franca *
Deputy Chief, Office of Engineering & Technology
Federal Communications Commission
Room 480 - Stop 1300
2000 M Street NW
Washington DC 20554

Regina Keeney *
Chief, Wireless Telecommunications Bureau
Room 5002 - Stop 2000
2025 M Street NW
Washington DC 20554

Ralph A. Haller *
Deputy Chief, Wireless Telecommunications Bureau
Federal Communications Commission
Room 5002 - Stop 2000
2025 M Street NW
Washington DC 20554

Jane E. Mago *
Office of Commissioner Rachelle B. Chong
Federal Communications Commission
Room 844 - Stop 0105
1919 M Street NW
Washington DC 20554

Byron F. Marchant *
Office of Commissioner Barrett
Federal Communications Commission
Room 826 - Stop 0103
1919 M Street NW
Washington DC 20554

Michael J. Marcus *
Associate Chief for Technology
Office of Engineering & Technology
Federal Communications Commission
Room 480 - Stop 1300
2000 M Street NW
Washington DC 20554

Ruth Milkman *
Office of the Chairman
Federal Communications Commission
Room 814 - Stop 0101
1919 M Street NW
Washington DC 20554

David R. Siddall *
Office of Commissioner Susan Ness
Federal Communications Commission
Room 832 - Stop 0104
1919 M Street NW
Washington DC 20554

Richard M. Smith *
Chief, Office of Engineering & Technology
Federal Communications Commission
Room 480 - Stop 1300
2000 M Street NW
Washington DC 20554

Gregory J. Vogt *
Office of Commissioner Susan Ness
Federal Communications Commission
Room 832 - Stop 0104
1919 M Street NW
Washington DC 20554

Richard K. Welch *
Office of Commissioner Rachelle B. Chong
Federal Communications Commission
Room 844 - Stop 0105
1919 M Street NW
Washington DC 20554

Richard B. Engelman *
Chief, Technical Standards Branch
Office of Engineering and Technology
Federal Communications Commission
Room 480 - Stop 1300
2000 M Street NW
Washington DC 20554

John J. McDonnell, Esquire
Attorney for MobileVision, L.P.
Reed Smith Shaw & McClay
1200 18th Street, N.W.
Washington, D.C. 20036

David E. Hilliard, Esquire
Edward A. Yorkgitis, Jr., Esquire
Michael K. Baker, Esquire
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006
Attorneys for Pinpoint Communications, Inc.

Wayne Watts, Esquire
Southwestern Bell Mobile Systems, Inc.
17330 Preston Road, Suite 100A
Dallas, TX 75252

Louis Gurman, Esquire
Jerome K. Blask, Esquire
Nodja S. Sodos, Esquire
Gurman, Kurtis, Blask & Freedman, Chartered
1400 16th Street, N.W., Suite 500
Washington, D.C. 20036
Attorneys for Southwestern Bell Mobile Systems, Inc.

Jeffrey L. Sheldon, Esquire
General Counsel
UTC
1140 Connecticut Avenue, N.W.
Suite 1140
Washington, D.C. 20036

Henry M. Rivera, Esquire
Larry S. Solomon, Esquire
Ginsburg, Feldman & Bress, Chartered
Attorneys for Metricom, Inc. and
Southern California Edison Company
1250 Connecticut Ave., N.W.
Washington, D.C. 20036

McNeil Bryan, President
Uniplex Corporation
2905 Country Drive
St. Paul, MN 55117

Mitchell Lazarus